

IN THE CLAIMS:

1-30. (Canceled)

31. (Currently amended) A transgenic fish selected from the group consisting of zebrafish and medaka fish, whose genome comprises ~~said fish comprising~~ a transgene comprising a gene encoding a gene ~~that encodes a transgene product comprising~~ wherein the gene product is i) an ablation promoting moiety, or ii) a coupled expression system consisting of comprising an ablation promoting moiety[,] and a cellular reporter protein that facilitates detection of cells expressing the transgene ~~product~~, wherein the ablation promoting moiety comprises at least one component of a pro-drug conversion system, and wherein the ~~transgene product gene~~ gene is operably linked to a regulatory DNA sequence[,], including at least a promoter element that regulates the expression of the gene encoding the gene ~~transgene~~ product such that the ~~transgene product gene~~ gene is expressed in a reproducible spatial and temporal pattern in the fish.

32. (Canceled)

33. (Previously presented) The transgenic fish of Claim 31 wherein the regulatory DNA sequence is of homologous origin, being from the same species as that of the transgenic fish.

34. (Previously presented) The transgenic fish of Claim 31 wherein the regulatory DNA sequence is of heterologous origin, being from a species that differs from that of the transgenic fish.

35. (Canceled)

36. (Currently amended) The transgenic fish of Claim 31 wherein the regulatory DNA sequence specifies ~~cell~~ cell-type specific expression of an ~~encoded transgene~~ the gene product.

37-42. (Canceled)

43. (Currently amended) The transgenic fish of Claim 31 wherein the ~~operably linked regulatory DNA sequence confers expression of a transgene encoded ablation promoting moiety, or a transgene encoded ablation promoting moiety and coupled reporter,~~ gene encoding the gene product is expressed in cells, cell types, or tissues that are relevant to modeling specific diseases, disorders, or conditions believed to be causally linked to the loss, or functional compromise, of the cells, cell types, or tissues expressing the ~~ablation promoting moiety~~ gene encoding the gene product.

44. (Currently amended) The transgenic fish of Claim 31 wherein the gene encoding the gene product ~~transgene encoded ablation promoting moiety or the transgene encoded ablation promoting moiety and coupled reporter~~ is specifically expressed in at least one of muscle cells, glial cells, pancreatic cells, liver cells, kidney cells, vascular cells, neuronal cells, heart cells, cartilage cells, and bone cells.

45. (Currently amended) A transgenic fish selected from the group consisting of zebrafish and medaka fish, whose genome comprises said fish comprising a transgene comprising a gene encoding a gene that encodes a transgene product comprising wherein the gene product is i) an ablation promoting moiety, or ii) a coupled expression system consisting of comprising an ablation promoting moiety[,] and a cellular reporter protein that facilitates detection of cells expressing the transgene ~~product~~, wherein the ablation promoting moiety ~~includes~~ comprises at least one component of a pro-drug conversion system, and wherein the ~~transgene product gene~~ is operably linked to a minimal promoter element such that an enhancer trap strategy ~~can be used to confer a reproducible spatial and temporal expression pattern to the transgene encoded product~~ is facilitated, whereby random integration of the transgene into the genome of the fish causes expression of the ~~transgene product gene encoding the gene product~~ to come under the control of an enhancer element which by becoming operably linked to the ~~transgene~~ gene encoding the gene product serves to promote expression of the ~~encoded transgene product gene~~ in a specific reproducible spatial and temporal pattern in the fish.

46. (Currently amended) The transgenic fish of Claim 45 wherein the ~~operably linked enhancer element confers expression of a transgene encoded ablation promoting~~

~~moiety, or a transgene encoded ablation promoting moiety and coupled reporter, gene encoding the gene product is expressed in cells, cell types, or tissues that are relevant to modeling specific diseases, disorders, or conditions believed to be causally linked to the loss, or functional compromise, of the cells, cell types, or tissues expressing the ablation promoting moiety gene encoding the gene product.~~

47. (Currently amended) The transgenic fish of Claim 45 wherein the gene encoding the gene product ~~transgene encoded ablation promoting moiety or the transgene encoded ablation promoting moiety and coupled reporter,~~ is specifically expressed in at least one of muscle cells, glial cells, pancreatic cells, liver cells, kidney cells, vascular cells, neuronal cells, heart cells, cartilage cells, and bone cells.

48. (Currently amended) A transgenic fish selected from the group consisting of zebrafish and medaka fish, whose genome comprises ~~said fish comprising a transgene comprising a gene encoding a gene that encodes a transgene product comprising wherein the gene product is i) an ablation promoting moiety, or ii) a coupled expression system consisting of comprising an ablation promoting moiety[,]~~ and a cellular reporter protein that facilitates detection of cells expressing the transgene ~~product,~~ wherein the ablation promoting moiety ~~includes~~ comprises at least one component of a pro-drug conversion system, and wherein the ~~transgene product gene~~ gene is operably linked to a minimal promoter and an upstream activator sequence (UAS), ~~the UAS being specifically bound by a given transcriptional activator, such that a modular binary expression system, made up of a transcriptional activator and a UAS-linked transgene product, can be used to confer a specific reproducible spatial and temporal expression pattern to the transgene encoded product, whereby the presence of the transcriptional activator is required for transcription of the UAS-linked transgene thereby regulating spatial and temporal expression of the UAS-linked transgene encoded product, and whereby the transcriptional activator acts in cis, being part of the transgene itself and being operably linked to its own regulatory DNA sequence including a promoter that confers a specific reproducible spatial and temporal expression pattern to the transcriptional activator and thereby to the UAS-linked transgene encoded product.~~

49. (Currently amended) The transgenic fish of Claim 48 wherein the ~~operably linked regulatory DNA sequence confers expression of the transcriptional activator and thereby to the UAS-linked transgene-encoded ablation promoting moiety, or the UAS-linked transgene-encoded ablation promoting moiety and coupled reporter,~~ gene encoding the gene product is expressed in cells, cell types, or tissues that are relevant to modeling specific diseases, disorders, or conditions believed to be causally linked to the loss, or functional compromise, of the cells, cell types, or tissues expressing the gene encoding the gene product. ~~ablation promoting moiety.~~

50. (Currently amended) The transgenic fish of Claim 48 wherein the ~~UAS-linked transgene-encoded ablation promoting moiety or the UAS-linked transgene-encoded ablation promoting moiety and coupled reporter,~~ gene encoding the gene product is specifically expressed in at least one of muscle cells, glial cells, pancreatic cells, liver cells, kidney cells, vascular cells, neuronal cells, heart cells, cartilage cells, and bone cells.

51. (Canceled)